



ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— with international search report

INTERNATIONAL SEARCH REPORT

 International Application No
 PCT/EP 03/05184

 A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H03M3/07

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

 Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 H02M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 257 810 A (PLESSEY OVERSEAS) 2 March 1988 (1988-03-02) column 5, line 36 - column 6, line 28; figures 4,5	1-19
A	US 2002/008499 A1 (HENRY GEORGE C) 24 January 2002 (2002-01-24) column 5, paragraph 77 - column 6, paragraph 81; figures 4-6	1-19
A	DE 100 45 693 A (INFINEON TECHNOLOGIES AG) 4 April 2002 (2002-04-04) abstract; figure 1	
A	EP 1 065 784 A (TEXAS INSTRUMENTS DEUTSCHLAND) 3 January 2001 (2001-01-03) abstract; figure 1	

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the International filing date but later than the priority date claimed

- *T* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *Z* document member of the same patent family

Date of the actual completion of the International search

18 March 2004

Date of mailing of the International search report

24/03/2004

Name and mailing address of the ISA

 European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax (+31-70) 340-3016

Authorized officer

Segaert, P

INTERNATIONAL SEARCH REPORT

Information on patent family members

Intern

Application No

PCT/JP 03/05184

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0257810	A	02-03-1988	GB 2193392 A	03-02-1988
			EP 0257810 A2	02-03-1988
			JP 63114566 A	19-05-1988
US 2002008499	A1	24-01-2002	US 2003169097 A1	11-09-2003
			US 2002008567 A1	24-01-2002
			US 2002027467 A1	07-03-2002
DE 10045693	A	04-04-2002	DE 10045693 A1	04-04-2002
			WO 0223706 A1	21-03-2002
			EP 1317793 A1	11-06-2003
EP 1065784	A	03-01-2001	DE 19928309 A1	04-01-2001
			EP 1065784 A1	03-01-2001
			US 6226194 B1	01-05-2001